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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,685	08/25/2003	Thomas J. Kelly	08350.3304-04	9970

58982 7590 06/28/2006

CATERPILLAR/FINNEGAN, HENDERSON, L.L.P.
901 New York Avenue, NW
WASHINGTON, DC 20001-4413

EXAMINER	
BROADHEAD, BRIAN J	

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,685	KELLY ET AL.	
	Examiner	Art Unit	
	Brian J. Broadhead	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-25 and 27-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-25 and 27-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The indicated allowability of claims 30 and 31 is withdrawn in view of the newly discovered new matter. Newly added claims 36 and 37 include limitations similar to those of claims 30 and 31. In reviewing the new claims it has been discovered that these limitations lack sufficient support in the specification.

Specification

2. The disclosure is objected to because of the following informalities: The application numbers of the related applications are not present on page 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 30, 31, 36, and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims include limitations that the first gateway on the first work machine can process the first message even if the first message has an identifier that identifies the destination module on the second work machine. There is no support for this in the originally filed specification. The section of the specification that discusses multiple work machines beings on paragraph 59, on

page 21. This section only discloses that the first message is forwarded or re-routed if the message is not destined for local processing. It does not disclose processing the first message like the destination module would.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 4 recites the limitation "the first module" in line 4. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 5 is rejected for being dependant on an indefinite claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-6, 8, 9, 10, 11, 12-25, 27-29, and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruzan et al., 6728603, in view of Bray et al., 6865460.

11. As per claims 1, 2, 3, 4, 8, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23 ,28, 29, 32, 33, 34, and 35, Pruzan et al. disclose detecting a first message sent by a source module on a first data link, wherein the first message is directed to a destination module

and includes an address identifier corresponding to the destination module lines 36-34, on column 3, lines 1-4, on column 7, lines 16-20, on column 8, and lines 24-27 on column 1; retrieving the first message and extracting the destination address identifier from the message on line 48, on column 6, through line 5, on column 7, and on line 52, on column 7 through line 26, on column 8; routing, based on the destination address and an address map including proxy logic identifiers, the first message to an element that performs functions associated with the destination module on lines 54-55, on column 7, and lines 10-23, on column 9; detecting a first message sent by a source module on a proprietary data link on lines 42-43, on column 4; providing the first message from the proxy logic element to a second module over a second data link interfaced by the proxy logic element on lines 5-10, on column 7; receiving a second message responsive to the first message from the second module via the second data link and routing, using an address map, the second message to the first module over the first data on lines 11-17, on column 14, these limitations are functional language that Pruzan et al. is capable of performing; and that the gateway can perform the functions of a node (module) on lines 10-15, on column 9; a source module for broadcasting a first message over a first data link that uses a first protocol, wherein the first message is intended for a destination module and includes a destination address identifier associated with the destination module on line 36-40, on column 3, lines 1-4, on column 7, lines 16-20, on column 8, and lines 24-27, on column 1; a gateway coupled to the first data link configures to monitor the first data link for messages on line 48, on column 6, through line 5 on column 7, route the intercepted message based on information in an

address map on lines 54-55, on column 7, and lines 10-23, on column 9; detecting a first message sent by a source module on a proprietary data link on lines 42-43, on column 4; providing the first message or information responsive to the first message from the proxy logic element to a second module over a second data link(32) interfaced by the proxy logic element on lines 5-10, on column 7, and lines 8-26, on column 8; receiving a second message responsive to the first message from the second module via the second data link and routing, using an address map, the second message to the first module over the first data on lines 11-17, on column 14, these limitations are functional language that Pruzan et al. is capable of performing.

12. Pruzan does not disclose that the element that performs functions associated with the destination module is a proxy logic element; intercepting the first message from the first data link based on a determination that the destination address corresponds to proxy logic included in the gateway and routing the message to the proxy logic that performs functions associated with the destination module based on data included in the intercepted module on lines 23-28, on column 4.

13. Bray et al. teach the element that performs functions associated with the destination module is a proxy logic element, intercepting the first message from the first data link based on a determination that the destination address corresponds to proxy logic included in the gateway and routing the message to the proxy logic that performs functions associated with the destination module based on data included in the intercepted module on lines 23-28, on column 4.

14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the software objects of Bray et al. in the invention of Pruzan et al. because such modification allows simpler hardware that is easily upgradeable as stated on lines 58, on column 8, through line 15, on column 9, of Bray et al.

15. As per claims 5, 6, Pruzan et al. disclose detecting that the first data link is incompatible with the second data link and translating the second message into a comparable message consistent with the first data link on lines 39-43, on column 6; generating, by the proxy logic element, a second message that is responsive to the first message and routing the second message to the source module via the first data link on lines 15-20, on column 1, this limitation is functional language that Pruzan is capable of performing.

16. As per claim 9, Pruzan et al. disclose the source nodes include at least one of either an on-board module and an off-board module (item 22).

17. As per claim 18, 25, Pruzan et al. disclose translating the second message into a comparable message consistent with the first data link on lines 39-43 and 48-60, on column 6.

18. As per claim 17, 24 Pruzan et al. disclose the second data link is a non-propriety standard data link including one of J1930, CAN, MODBUS, serial standard data link, and Ethernet on lines on lines 42-43, on column 4. The second link can also be viewed as one of the other protocols on bus 24 of Pruzan et al.

19. As per claims 27, Pruzan et al. discloses the limitations above; a master controller remotely located with respect to the work machine and couple to the work

machine via a wireless data link (40); the gateway routes the intercepted message, based on information in an address map, to proxy logic located in the gateway that performs function associated with the master controller on lines 8-26, on column 8, and lines 22-30, on column 9.

20. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pruzan et al., 6728603, in view of Bray et al., 6865460 as applied to claims 1-6, 8, 9, 10, 11, 12-25, 27-29, and 32-35 above, and further in view of Elson et al., 2003/0014521.

21. Pruzan et al. and Bray et al. disclose the limitations as set forth above. They do not disclose retrieving by the gateway a proxy logic element from a remote location. Elson et al. teach retrieving by the gateway a proxy logic element from a remote location in paragraph 96. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the retrieving of Elson et al. in the invention of Pruzan et al. and Bray et al. because such modification would enable the gateway to respond to evolving customer requirements as stated in paragraph 31 of Elson et al.

Response to Arguments

22. Applicant's arguments filed 4-4-06 have been fully considered but they are not persuasive. The argument that the routing of the message to the proxy logic is not taught is not convincing. Pruzan et al. discloses a gateway that examines each message on the bus in order to determine where to send it (column 7, lines 47-67). Pruzan et al. also discloses that the gateway is able to emulate any node that is on the bus and take addresses on the bus (column 9, lines 10-22). While Pruzan et al. is not explicit as to what "emulate" means, Bray et al. provides a teaching that the a gateway

can operate in software what had been operated in hardware previously. In arguing the inherency of an address map it is stated that a technical basis has not been provided. In Pruzan et al. it is disclosed that the gateway examines each message on the bus and uses the destination address in order to determine where to send it on column 7, lines 47-67. If the gateway is looking at the address and then sending the message to one destination of a possible many based on this address there must be some set of instructions in the gateway used to decide where to send it. This would be a map. Applicant's invention is directed at replacing hardware modules in a vehicle with software modules that can provide the same functions. Pruzan et al. discloses emulation but does not go into detail. Bray et al. explicitly recites that the hardware modules and software modules in a central computer or gateway are equivalents. Elson et al. further discloses the use of Java and using Java applets as the proxy logic elements. The current invention also claims many specific message routings and then responses to these routings. Many of these limitations are functional language that any network is capable of performing. That's the purpose of a network, to exchange messages.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 571-272-6957. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJB

THOMAS BLACK
SUPERVISORY PATENT EXAMINER